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434 averaged below $2 per person per annum and revenues were of that low order for all Southeast Asia countries except Malaya, where it was about $70 per person, a sign that Malaya, of all these countries, was the one where work and activities centred on money and had moved farthest from the subsistence principle.

It has to be noted that the small amount of money involved in such ecologies does not mean poverty in the European sense : it represents only that margin of necessities which is outside the subsistence ecology. In addition to the little money it obtains, each family in general has both its food and its domestic equipment produced by itself, or in conjunction with helpers from the village community. This is a state of society long since outgrown in Europe though we have to allow for it in every phase of Southeast Asia industry and trade and to assume it will continue to play a part in future changes.

Agricultural Processing

256 249 Because Southeast Asia is so overwhelmingly agricultural its mechanical industries relate largely to agricultural processes. Rice mills, sugar mills, starch factories (from sago and tapioca) and sack factories, have all grown up in connection with agricultural processing in every one of these territories. In addition, rubber factories, oil presses and sugar mills have been established on western lines in association with European-style agricultural developments. The fabrication of rubber has not gone far within this region; tyres have been made in Java where also mass-produced rubber shoes were made for Southeast Asia markets. For the most part, mechanical processing industries are located peripherally to the countries concerned and they operate primarily for immediate export, though small rice, brick and sugar factories have spread inland away from coastal sites.

Textiles

439 288 Apart from food, the chief personal need of Southeast Asia people is cloth and the demand for textiles ranks as by far the greatest single item of fabricated goods. Most of the textiles recorded are imported; the domestic industry has tended to disappear except in the remoter districts, and textile factories have not been set up to any extent within Southeast Asia. Cotton spinning at Semarang, Tegal and Damak and some 200 small

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weaving factories in Java, were the leading developments in local textile industries, but the bulk of cloth and even of raw cotton has been brought in from abroad. Just before the war Southeast Asia was absorbing textiles to the value of well over $300 million per annum; much of it was cheap cloth from Europe, India and Japan, but there was a substantial need for the very finest cotton cloth produced anywhere and quite an exacting local standard of qualities. Should this huge demand for textiles stimulate local industry within the new nationalist units, Burma, Siam and Indochina may improve the quality and output of their present scanty and very inferior raw cotton.

Road and rail management, engineering maintenance and port industries form a leading group of mechanical industries directly affecting local techniques and introducing forms of industrialisation on western lines. The capital equipment for these activities is imported as are nearly all metal manufactures for other purposes. Manufactured goods form the largest single category of goods moving into Southeast Asia, to a total of nearly $500 million annually before the war. These manufactured imports chiefly went to urban consumers, yet simple farming tools and articles like needles and scissors went in large quantities far into every country. Although this category was broad, the components were very varied so that the value of each ranked comparatively low. Manufactured articles of western type showed little sign of being made locally, except in Java where successful attempts at making electric equipment had gone on for some years to supply the Southeast Asia markets with very cheap electrical goods like lamps and filaments, suggesting the possibility that Java may become industrialised on the Japanese pattern for mass production methods, and using part-time or women workers. In neighbouring territories, however, there are no such immediate prospects because labour has proved costly in proportion to its skill.

Mining Industries and Prospects

Mining industries of great value have developed in Malaya, Burma, Sumatra, Borneo, the Philippines and the small islands east of Sumatra. Tin and petroleum have been the region's specialities so far and these have assumed great importance, combining to be chiefly responsible for the prewar annual exports of about $650 million of mineral products from Southeast Asia

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the resources of temperate forests show signs of exhaustion. The defects of tropical forest for a timber industry have been explained; it is not clear why no interest has been shown in a pulping industry based on tropical trees most of which have the advantage of relatively quick natural replacement. Pulping of tropical woods may yet solve the world paper shortage, especially as woody or fibrous tropical plants might be cropped for pulping instead of depending on predatory deforestation as is the case in the pulping industries of temperate areas today.

The forests, however, supply the basic domestic fuel of the region. Apart from westernised suburbs of the town, charcoal and wood are the normal means of cooking, in which respect the domestic life continues today much as it did two or three centuries ago. Wealthier residences may use electricity which is mostly steam-generated from imported coals, but domestic coal-gas is uncommon. Domestic heating, of course, is a question which does not arise in these climates. For their illuminants the bulk of the people turn to their trees, to coconut oil, second to which is paraffin oil from within the region. Urban areas are electrically lit.

From Commodity Production to Local Processing

Because the production of primary agricultural commodities like rubber, copra, medicinal plants, and tapioca, all the basis of industrial processes elsewhere, has been the function of Southeast Asia territories over the first third of this century, culminating in an immediate prewar export valued at nearly $1,000 million per annum, processing and manufacturing of these commodities may cease to be done overseas and become the basis of industrialisation within Southeast Asia to make use of local power resources and of the margin of time available among rural populations. A tendency in this direction was very evident in Java where skill and incentive were present; rubber goods, textile printing, preparation of medicines, confectionary and refining essential oils had grown to significant proportions by 1941 and the enforced isolation of the war years should have intensified them, though a resumption of normal trading relations will oblige these industries to so organise that they meet the rival processed goods of zones as varied as India, Europe and the Far East. The influence of India as a source of manufactured goods was evident, particularly in textiles, before the war and could become even more prominent after India's

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additional expansion under the almost autarchic conditions of the war period. Political instability within India can, however, offset this advantage.

It is to be noted that the great markets for goods manufactured from Southeast Asia commodities so far have been in Europe and the United States. The little nations of Southeast Asia seem ill-prepared to absorb much of them for some years. Because food is produced in such large quantities in this typically agricultural zone, we may not overlook the possibilities of manufacturing foods in forms such as biscuits, jam and canned varieties. Hitherto the tight association with industrialised colonial powers has to some extent dissuaded intense application to the miscellany of industrial productions possible in Southeast Asia, yet the local nationalisms and the incentive to establish more balanced social and communal systems tend to encourage local industries. Burma, Siam and Indochina before the war were only lightly touched by these tendencies to manufacture.

From the point of view of the rest of the world, a re-orientation of the tremendous quantity of Southeast Asia's primary agricultural materials now handled by processing industries already established in Europe and the United States, would have major effects, not least on the ability of those industries to maintain their manufactured exports at levels which have been increasing over the last century. Thus, a nationalistic Southeast Asia driving towards self-sufficiency industrially is likely to diminish the international trade streams to and from this region, though it may progressively increase the occupational activities and living standards of Southeast Asia people.

Intra-Regional Trade

A total value of about $400 million was involved in the prewar interchange of goods and commodities between one part and another of the Southeast Asia region. This intra-regional trade was relatively small because the component units of the region produced much the same commodities and goods, by reason of which the countries tended to be rivals rather than customers of one another. An additional factor was the pull of several metropolitan areas, Britain, France, Holland and the United States, which acted to lessen intra-regional trade and to lessen the regularisation and rationalisation of production in Southeast Asia as a whole. Food